

Exhibit 9

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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: NATIONAL)
PRESCRIPTION) MDL No. 2804
OPIATE LITIGATION)
_____) Case No.
_____) 1:17-MD-2804
_____)
THIS DOCUMENT RELATES) Hon. Dan A.
TO ALL CASES) Polster

TUESDAY, APRIL 23, 2019

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CONFIDENTIALITY REVIEW

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Videotaped deposition of Mark A. Schumacher, M.D., Ph.D., held at the offices of Morgan, Lewis & Bockius LLP, One Market, Spear Street Tower, San Francisco, California, commencing at 9:35 a.m., on the above date, before Carrie A. Campbell, Registered Diplomate Reporter and Certified Realtime Reporter.

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<p>1 And is that a binder of 2 materials that you brought into this 3 deposition?</p> <p>4 A. That's correct.</p> <p>5 MR. ERCOLE: I'd actually like 6 to mark that as Exhibit 1 if we can, 7 and then I'd like to make a copy of 8 that over the break.</p> <p>9 THE WITNESS: That's fine.</p> <p>10 (Schumacher Exhibit 1 marked 11 for identification.)</p> <p>12 QUESTIONS BY MR. ERCOLE:</p> <p>13 Q. And, sir, I know your counsel 14 just articulated, but I need to ask you: 15 What is Exhibit 1, to the best of your 16 recollection?</p> <p>17 A. Sure. It contains my draft 18 report -- or the expert report. It also 19 includes exhibits provided by counsel as well 20 as materials considered, and finally a copy 21 of my curriculum vitae.</p> <p>22 Q. Okay.</p> <p>23 A. I believe -- yeah.</p> <p>24 Q. And you referred to a draft 25 report.</p>	<p>1 respect to pharmaceutical marketing before, 2 correct?</p> <p>3 A. That's correct.</p> <p>4 Q. Never given any expert opinion 5 with respect to pain management before, 6 correct?</p> <p>7 MR. LOESER: Objection to form.</p> <p>8 QUESTIONS BY MR. ERCOLE:</p> <p>9 Q. You can answer the question.</p> <p>10 A. I've been asked for my expert 11 opinion about pain management multiple times 12 as part of my role as medical director of 13 pain management at UCSF Medical Center, as 14 well as chief of the division of pain 15 medicine since 2010.</p> <p>16 Q. You've never given any type of 17 expert opinion in any type of litigation case 18 with respect to pain management, correct?</p> <p>19 A. That is correct.</p> <p>20 Q. And you've never given any type 21 of expert opinion in any litigation case 22 concerning addiction, correct?</p> <p>23 A. That is correct.</p> <p>24 (Schumacher Exhibit 2 marked 25 for identification.)</p>
<p>1 What did you mean by that?</p> <p>2 A. I misspoke. It is my expert 3 report.</p> <p>4 Q. I believe from the initial set 5 of questions you have never been deposed as 6 an expert before; is that correct?</p> <p>7 A. That is correct.</p> <p>8 Q. Have you ever been proffered as 9 an expert in any case before?</p> <p>10 A. What do you mean by that?</p> <p>11 Q. Sure.</p> <p>12 Have you ever attempted to 13 serve as an expert before in any type of 14 litigation?</p> <p>15 A. No. No.</p> <p>16 Q. So it stands to reason you've 17 never given, in any type of litigation, case 18 or proceeding, any type of expert opinion 19 before; is that correct?</p> <p>20 A. That is correct.</p> <p>21 It's unusual in that -- in that 22 regards, but this is a very important area of 23 concern of mine.</p> <p>24 Q. So just to check off the box, 25 you've never given any expert opinion with</p>	<p>1 QUESTIONS BY MR. ERCOLE:</p> <p>2 Q. Okay. Let's mark this as 3 Exhibit 2.</p> <p>4 Dr. Schumacher, is that -- make 5 sure I'm pronouncing it right.</p> <p>6 A. Yes, thank you. Yes, that is 7 correct, Schumacher, yes.</p> <p>8 Q. I have -- my last name is 9 Italian, so people frequently mispronounce 10 it, so I just wanted to make sure I was not 11 doing that with you.</p> <p>12 Sir, is this a copy of your 13 curriculum vitae, or CV?</p> <p>14 A. Yes, it is.</p> <p>15 Q. Okay. And for your 16 undergraduate education, you attended the 17 University of California; is that correct?</p> <p>18 A. Yeah, at San Diego. University 19 of California at San Diego, that's correct.</p> <p>20 Q. Let me ask this: With respect 21 to that CV, is there anything in there that 22 is inaccurate or that at this point in time 23 you need to change?</p> <p>24 And I'll represent that's the 25 CV that was produced in connection with your</p>

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<p>1 expert report in this case.</p> <p>2 A. As far as my own personal</p> <p>3 knowledge, there's potentially a</p> <p>4 typographical error, but content-wise, as far</p> <p>5 as I'm aware.</p> <p>6 Q. And for -- and what was your</p> <p>7 major as an undergraduate?</p> <p>8 A. Biology with a concentration in</p> <p>9 physiology.</p> <p>10 Q. You did not major in marketing,</p> <p>11 correct?</p> <p>12 A. That is correct.</p> <p>13 Q. And for graduate education,</p> <p>14 where did you -- where did you go for your</p> <p>15 graduate education?</p> <p>16 A. I first completed a Ph.D. in</p> <p>17 physiology and pharmacology at the University</p> <p>18 of California-San Diego.</p> <p>19 Q. And you say you first did that.</p> <p>20 What did you do afterward?</p> <p>21 A. Well, I continued and became</p> <p>22 sort of a combined -- I joined the school of</p> <p>23 medicine at UC-San Diego and completed my</p> <p>24 doctorate in medicine after that.</p> <p>25 Q. Do you recall when that was?</p>	<p>1 assistant professor soon after completing my</p> <p>2 residency.</p> <p>3 Q. And where did you become a</p> <p>4 assistant professor?</p> <p>5 A. That was at the same</p> <p>6 institution, the University of California at</p> <p>7 San Francisco.</p> <p>8 Q. Do you recall when that was?</p> <p>9 A. Excuse me, just to make sure I</p> <p>10 don't fumble the numbers.</p> <p>11 I was -- I became a clinical</p> <p>12 instructor from 1994 to 1995 and became on</p> <p>13 faculty as an assistant professor in</p> <p>14 residence in 1995 forward.</p> <p>15 Q. And the residency that you did</p> <p>16 was in anesthesia; is that correct?</p> <p>17 A. Anesthesiology, that's correct.</p> <p>18 Q. What did you do -- well, are</p> <p>19 you still an assistant professor at this</p> <p>20 point in time?</p> <p>21 A. I'm a professor, full</p> <p>22 professor, and chief of the division of pain</p> <p>23 medicine at the University of California-San</p> <p>24 Francisco in the department of anesthesia and</p> <p>25 perioperative care.</p>
<p style="text-align: center;">Page 19</p> <p>1 A. I believe it's 1990.</p> <p>2 Q. You did not -- you do not have</p> <p>3 a Ph.D. in marketing, correct?</p> <p>4 A. That's correct.</p> <p>5 Q. And you do not have a Ph.D. in</p> <p>6 economics, correct?</p> <p>7 A. That is correct.</p> <p>8 Q. With respect to -- after you</p> <p>9 graduated from medical school, where did you</p> <p>10 do your residency and postgraduate training?</p> <p>11 A. Sure.</p> <p>12 And I'm getting over a cold, so</p> <p>13 sometimes I have to clear my throat here.</p> <p>14 Excuse me.</p> <p>15 I did a one-tier -- pardon me,</p> <p>16 a one-year internship at Cedar Sinai Medical</p> <p>17 Center in internal medicine, and that was</p> <p>18 followed by a residency in anesthesia at</p> <p>19 University of California-San Francisco.</p> <p>20 Q. Any other residency or</p> <p>21 postgraduate training that you did?</p> <p>22 A. I did some additional sort of</p> <p>23 combined postgraduate fellowship work in</p> <p>24 mainly research areas in pain throughout, and</p> <p>25 became a clinical instructor and then</p>	<p style="text-align: center;">Page 21</p> <p>1 Q. And what does perioperative</p> <p>2 care mean?</p> <p>3 A. It entails a range of subareas</p> <p>4 for anesthesiology that includes pain</p> <p>5 medicine, critical care, perioperative</p> <p>6 evaluations that encompass the sort of total</p> <p>7 care around a patient.</p> <p>8 Q. Does perioperative care involve</p> <p>9 care associated with surgical procedures?</p> <p>10 A. That is correct.</p> <p>11 Q. And so when you say "total care</p> <p>12 around a patient," is it fair to say you're</p> <p>13 talking about total care around a patient</p> <p>14 immediately before and immediately after a</p> <p>15 surgery?</p> <p>16 A. So the mission of</p> <p>17 anesthesiology encompasses the management of</p> <p>18 pain. Certain departments of anesthesia have</p> <p>19 descriptions that include and pain</p> <p>20 management.</p> <p>21 Our particular department is --</p> <p>22 was originally just called the department of</p> <p>23 anesthesia, and then it broadened its title</p> <p>24 to anesthesia and perioperative care to</p> <p>25 project a broader term to include the</p>

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<p style="text-align: center;">Page 22</p> <p>1 responsibilities of anesthesiologists before, 2 during and after their operation.</p> <p>3 Q. And with respect to the duties 4 of anesthesiologists after an operation, do 5 anesthesiologists continue to see patients 6 over long term after a particular surgery 7 takes place?</p> <p>8 A. Typically an anesthesiologist 9 would have a follow-up visit after their 10 operation while they're still in the 11 hospital.</p> <p>12 Q. You said "typically." 13 Is that one -- there's 14 typically a follow-up visit; is that correct?</p> <p>15 A. That's the standard of care, 16 that there's a follow-up visit, that's 17 correct.</p> <p>18 Q. And do you treat -- strike 19 that.</p> <p>20 Do you treat chronic pain 21 patients in an outpatient setting?</p> <p>22 A. No, I do not; however, I have 23 managed and taken care of patients with 24 chronic pain, or what we call acute on 25 chronic pain, for 20 years on the inpatient</p>	<p style="text-align: center;">Page 24</p> <p>1 Q. -- you do not treat patients in 2 an outpatient setting; is that correct?</p> <p>3 A. That's correct. That's 4 correct.</p> <p>5 Q. Okay. Are you board certified 6 in pain medicine?</p> <p>7 A. No, I am not.</p> <p>8 Q. Are you board certified in 9 addiction?</p> <p>10 A. No, I'm not.</p> <p>11 Q. What are you board certified 12 in?</p> <p>13 A. In anesthesiology.</p> <p>14 Q. With respect to -- you talked 15 about how, for anesthesiologists, the 16 standard of care is after a surgery, there is 17 typically a follow-up visit.</p> <p>18 Do you recall that?</p> <p>19 A. That's correct.</p> <p>20 Q. Okay. Typically are there 21 multiple follow-up visits?</p> <p>22 A. Well, I guess I would want to 23 know what the context of that is; that is, 24 under what circumstance are you describing.</p> <p>25 Q. Sure. I'm just getting a sense</p>
<p style="text-align: center;">Page 23</p> <p>1 side within the hospital.</p> <p>2 Q. You said -- was it acute 3 chronic pain? Is that what you --</p> <p>4 A. I said chronic pain, and what 5 we term acute on chronic. That is a patient 6 who has a chronic painful condition who has 7 come into the hospital for some other acute 8 problem. For example, they may have had -- 9 require an operation on their colon or their 10 gallbladder, but they have a chronic painful 11 condition like back pain, for example.</p> <p>12 Q. And so just so my notes are 13 clear, you do not treat those patients in an 14 outpatient setting; is that correct?</p> <p>15 A. As chief of the division of 16 pain medicine, I oversee all aspects of our 17 division, and I have recruited and have a 18 medical director for outpatient pain 19 management center.</p> <p>20 Q. Okay. So let me -- maybe my 21 question wasn't clear.</p> <p>22 A. Sure.</p> <p>23 Q. With respect to you, do you 24 treat -- just my notes are clear --</p> <p>25 A. Sure.</p>	<p style="text-align: center;">Page 25</p> <p>1 of with respect to anesthesiologists.</p> <p>2 A. Uh-huh.</p> <p>3 Q. After a surgery takes place, 4 how long -- and that patient is discharged 5 from the hospital, how long will an 6 anesthesiologist typically follow up with or 7 treat a patient?</p> <p>8 MR. LOESER: Objection. Form.</p> <p>9 THE WITNESS: Again, the 10 standard for follow-up is that an 11 anesthesiologist, or anesthesia part 12 of the team, sees that patient 13 postoperatively at least once and -- 14 yeah.</p> <p>15 QUESTIONS BY MR. ERCOLE:</p> <p>16 Q. So the standard of care then is 17 for the anesthesiology team or doctors to 18 then see a patient at least once after a 19 surgery takes place.</p> <p>20 Is that what your testimony is?</p> <p>21 A. All right. Based on the 22 context. If there are other factors 23 involved, the complexity of the case that 24 requires additional follow-up, there could be 25 additional visits by the anesthesiologist.</p>

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<p>1 Q. And would you agree that 2 anesthesiologists see patients once in the 3 hospital before discharge?</p> <p>4 MR. LOESER: Objection. Form.</p> <p>5 THE WITNESS: Physicians that 6 have been trained as anesthesiologists 7 have a variety of roles. If they have 8 a role that's just assigned to the 9 operating room, then what we just 10 described is a good depiction.</p> <p>11 There are other 12 anesthesiologists like myself that 13 participate in pain management care on 14 a consult service, and as 15 anesthesiologists and pain medicine 16 physicians, we see patients daily and 17 follow-up visits as well.</p> <p>18 QUESTIONS BY MR. ERCOLE:</p> <p>19 Q. And that's in a hospital 20 setting, correct?</p> <p>21 A. Yeah, in my case it is.</p> <p>22 Q. Okay.</p> <p>23 A. In other cases, those 24 anesthesiologists that will see patients in 25 the outpatient setting.</p>	<p>1 A. No.</p> <p>2 Q. So you have no formal training 3 in marketing, correct?</p> <p>4 A. That's correct.</p> <p>5 Q. Have you ever -- and is it fair 6 to say you don't have any specialized 7 knowledge with respect to sales or marketing 8 analyses generally, correct?</p> <p>9 MR. LOESER: Objection. Form.</p> <p>10 THE WITNESS: Is there another 11 way to ask that question? I'm not 12 quite sure what the question is.</p> <p>13 QUESTIONS BY MR. ERCOLE:</p> <p>14 Q. Sure.</p> <p>15 I'm just asking in terms of 16 your -- in terms of your background and 17 specialization here, let me ask this: When 18 was the national -- what is the National 19 Academy of Sciences consensus report that you 20 referenced?</p> <p>21 A. Right.</p> <p>22 So I was invited to serve as a 23 committee member on an analysis to 24 characterize and provide recommendations to 25 the national opiate epidemic, to serve on the</p>
<p style="text-align: center;">Page 27</p> <p>1 Q. Okay. And with respect to you, 2 have you -- strike that.</p> <p>3 Do anesthesiologists see 4 patients on monthly bases over periods of 5 years?</p> <p>6 Is that their responsibility?</p> <p>7 MR. LOESER: Objection. Form.</p> <p>8 THE WITNESS: Anesthesiologists 9 that are pain management physicians 10 working in the outpatient clinic do 11 see patients on a regular basis, 12 potentially monthly.</p> <p>13 QUESTIONS BY MR. ERCOLE:</p> <p>14 Q. You do not, correct?</p> <p>15 A. That is correct.</p> <p>16 Q. Okay. Do you have any formal 17 education in marketing?</p> <p>18 A. My education in marketing 19 represents reading and review of literature 20 that was included in review of the literature 21 for the National Academy of Sciences, the 22 consensus report from that, as well as some 23 materials that were also included and 24 reviewed for this report I prepared.</p> <p>25 Q. Anything else?</p>	<p style="text-align: center;">Page 29</p> <p>1 National Academy of Sciences Engineering and 2 Medicine. And this was requested in order to 3 understand -- not so much appoint blame, but 4 to understand, characterize and to provide 5 recommendations.</p> <p>6 Within that body of work, there 7 was, by the committee, the realization that 8 opiate manufacturing, marketing, was a key 9 cause and driver for increased prescribing 10 opioids and also a key driving force for the 11 opioid epidemic.</p> <p>12 Q. And we'll get into those 13 issues, but when was that consensus report 14 published?</p> <p>15 A. It was published in, I 16 believe -- let me just double-check, but I 17 believe it's -- just one minute.</p> <p>18 In 2017.</p> <p>19 Q. Okay. And so before 2017, you 20 had no education or specialized experience 21 with respect to marketing; is that fair to 22 say?</p> <p>23 MR. LOESER: Objection. Form.</p> <p>24 Mischaracterizes his testimony.</p> <p>25 THE WITNESS: I think that --</p>

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<p style="text-align: center;">Page 30</p> <p>1 maybe could you say your question one 2 more time, please --</p> <p>3 QUESTIONS BY MR. ERCOLE:</p> <p>4 Q. Sure.</p> <p>5 A. -- because I got a little bit 6 mixed up with what you're asking.</p> <p>7 Q. No problem. Let's do it this 8 way.</p> <p>9 You don't teach courses in 10 marketing, correct?</p> <p>11 A. That is correct.</p> <p>12 Q. You don't -- you haven't 13 published articles regarding marketing, 14 correct?</p> <p>15 MR. LOESER: Objection. 16 Mischaracterizes his testimony.</p> <p>17 THE WITNESS: Within my 18 publication list, I have no 19 publications in marketing.</p> <p>20 QUESTIONS BY MR. ERCOLE:</p> <p>21 Q. And you have no background -- 22 strike that.</p> <p>23 You have no degree in anything 24 concerning marketing, correct?</p> <p>25 A. That is correct.</p>	<p style="text-align: center;">Page 32</p> <p>1 I was -- my travel expenses 2 were reimbursed, as I recall.</p> <p>3 Q. So just so I understand -- let 4 me ask this: Other than those talks that 5 you've given at -- are they -- how would you 6 define it?</p> <p>7 Were they talks given for the 8 pharmaceutical companies?</p> <p>9 A. I don't quite understand the 10 meaning of that question.</p> <p>11 Q. Yeah.</p> <p>12 So what were the talks about?</p> <p>13 A. Sure. Okay.</p> <p>14 Well, one had to do with 15 Anesiva. It related to my research on the 16 capsaicin receptor, which has been a 17 direction of my research. It's a hot chili 18 pepper receptor that is a potential target 19 for analgesic therapy, for chronic pain 20 therapy. And it discussed the structure and 21 function of that receptor in the peripheral 22 nervous system.</p> <p>23 The other talk, the Zambon 24 talk, was -- followed in a similar light. It 25 talked about the structure and what we call</p>
<p style="text-align: center;">Page 31</p> <p>1 Q. And you don't hold yourself out 2 as an expert in marketing, do you?</p> <p>3 MR. LOESER: Objection. Form.</p> <p>4 THE WITNESS: I have not stated 5 I've ever been an expert in marketing.</p> <p>6 QUESTIONS BY MR. ERCOLE:</p> <p>7 Q. Have you ever consulted for a 8 pharmaceutical company?</p> <p>9 A. I have, as part of my academic 10 career, had a collaboration with, I 11 believe -- and I'll just double-check 12 possibly two companies.</p> <p>13 Q. And as you're double-checking, 14 can you let me know what you're referring to 15 there in your CV?</p> <p>16 A. Sure. Sure. Just a minute.</p> <p>17 And again, I'm not sure it 18 follows the definition that you provided.</p> <p>19 I was invited to give a talk at 20 one company called Anesiva some years ago, 21 and on another I gave a talk in Italy, Zambon 22 Pharmaceuticals.</p> <p>23 Q. Were you paid to give those 24 talks?</p> <p>25 A. No. No.</p>	<p style="text-align: center;">Page 33</p> <p>1 splice variants, sort of cousins of this 2 receptor and how there may be some potential 3 for therapeutic development in targeting that 4 receptor.</p> <p>5 Q. Any other speeches that you've 6 done or given for pharmaceutical companies?</p> <p>7 A. If you take -- just let me just 8 go through them --</p> <p>9 Q. Sure.</p> <p>10 A. -- to be as accurate as 11 possible.</p> <p>12 One other thing I came across 13 that may be relevant, in 2010 I was invited 14 to give a talk about unmet needs of analgesia 15 for a venture innovation program as part of 16 UCSF, and that's where a number of, I think, 17 representatives from pharmaceutical companies 18 or startups were present. That's where I was 19 introduced to a representative from the 20 Zambon, for example.</p> <p>21 Let me just continue. I think 22 that's right, yeah.</p> <p>23 Q. Have you ever served as a 24 speaker regarding opioids for any 25 pharmaceutical company?</p>

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	<p>1 A. No, not that I recall.</p> <p>2 Q. Have you ever received any</p> <p>3 grants from pharmaceutical -- strike that.</p> <p>4 Have you ever received a grant</p> <p>5 from a pharmaceutical company for a study</p> <p>6 that you've done?</p> <p>7 A. Not that I'm aware of, no.</p> <p>8 Q. Best of your recollection, have</p> <p>9 you ever received any payments, whether in</p> <p>10 the form of consulting fees or honorariums or</p> <p>11 anything, from pharmaceutical companies?</p> <p>12 A. Not that I recall.</p> <p>13 Q. We talked a little bit about</p> <p>14 your clinical practice currently.</p> <p>15 Well, let me ask this:</p> <p>16 Currently, what is the name of the hospital</p> <p>17 where you will see patients?</p> <p>18 A. The Moffitt-Long Hospitals at</p> <p>19 UCSF Medical Center. I also --</p> <p>20 Q. Sorry. I apologize. And just</p> <p>21 tell me to shut up if I'm talking over you,</p> <p>22 or your counsel can tell me to shut up,</p> <p>23 that's fine. I apologize.</p> <p>24 MR. LOESER: Really? We can do</p> <p>25 that?</p>	<p>1 MR. LOESER: Objection. Form.</p> <p>2 THE WITNESS: So -- although</p> <p>3 that's a question you asked before, I</p> <p>4 would just amend that in my training</p> <p>5 and rotations in the residency program</p> <p>6 in anesthesiology, I was a trainee</p> <p>7 evaluating and providing treatment</p> <p>8 plans in the outpatient setting during</p> <p>9 that time.</p> <p>10 QUESTIONS BY MR. ERCOLE:</p> <p>11 Q. And when was that?</p> <p>12 A. During my anesthesia residency,</p> <p>13 which was -- just a minute.</p> <p>14 Essentially 1991 through 1994.</p> <p>15 Q. And since then, you have not</p> <p>16 treated any chronic pain patients in an</p> <p>17 outpatient setting, correct?</p> <p>18 MR. LOESER: Objection. Form.</p> <p>19 THE WITNESS: Well, I</p> <p>20 participate at the pain management</p> <p>21 center on occasion with our</p> <p>22 multidisciplinary panel reviews of</p> <p>23 patients, and so I will participate in</p> <p>24 that regards. I will sit in with a</p> <p>25 review of patient cases and provide</p>
	<p>1 THE WITNESS: I also see</p> <p>2 patients at the Mission Bay Hospital</p> <p>3 campus.</p> <p>4 QUESTIONS BY MR. ERCOLE:</p> <p>5 Q. So with respect to the</p> <p>6 Moffitt-Long Hospital, how often do you see</p> <p>7 patients there?</p> <p>8 A. I see chronic pain patients as</p> <p>9 well as acute on chronic patients</p> <p>10 approximately two days every week.</p> <p>11 Q. And how about with respect to</p> <p>12 the Mission Long {sic}?</p> <p>13 A. It varies based on need. There</p> <p>14 I would fill in for patients -- for</p> <p>15 attendings that may be unable, so that's much</p> <p>16 less often. I don't know how to describe</p> <p>17 that, but that's less common.</p> <p>18 Q. Okay. I mean, would you say</p> <p>19 once a month maybe?</p> <p>20 A. I think that's fair.</p> <p>21 I also co-round with a</p> <p>22 pediatric pain team as well, so on average,</p> <p>23 maybe once a month there.</p> <p>24 Q. Have you ever treated chronic</p> <p>25 pain patients in a outpatient setting?</p>	<p>1 recommendations when appropriate.</p> <p>2 QUESTIONS BY MR. ERCOLE:</p> <p>3 Q. Do you meet with the patients</p> <p>4 there?</p> <p>5 A. That is -- is the question do</p> <p>6 we meet with the patients while we're</p> <p>7 discussing?</p> <p>8 Q. Well, I mean --</p> <p>9 A. Sorry.</p> <p>10 Q. Yeah, sure.</p> <p>11 My question is a little bit</p> <p>12 different.</p> <p>13 Do you meet with -- strike</p> <p>14 that. Let me go back.</p> <p>15 How often do you do that?</p> <p>16 MR. LOESER: Objection. Form.</p> <p>17 THE WITNESS: Right.</p> <p>18 On average, probably once a</p> <p>19 month. Yeah, that's about right.</p> <p>20 And I -- as part of that --</p> <p>21 sorry, just to -- I'll discuss cases</p> <p>22 with the chronic pain faculty there or</p> <p>23 medical director at least once a</p> <p>24 month, that's correct.</p>

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<p style="text-align: right;">Page 38</p> <p>1 QUESTIONS BY MR. ERCOLE:</p> <p>2 Q. And when you say you will --</p> <p>3 you "review patient cases and discuss with</p> <p>4 faculty there," do you actually meet with --</p> <p>5 you, individually, meet with patients in that</p> <p>6 circumstance?</p> <p>7 A. I typically do not meet with</p> <p>8 the patients myself.</p> <p>9 Q. Okay. Dr. Schumacher, I just</p> <p>10 want to ask you a couple of questions</p> <p>11 about -- to understand your expertise here.</p> <p>12 You are not an expert in</p> <p>13 economics, correct?</p> <p>14 MR. LOESER: Objection. Form.</p> <p>15 THE WITNESS: I have not gained</p> <p>16 an expertise in economics.</p> <p>17 QUESTIONS BY MR. ERCOLE:</p> <p>18 Q. And you're not a legal expert,</p> <p>19 correct?</p> <p>20 MR. LOESER: Objection. Form.</p> <p>21 THE WITNESS: I have not</p> <p>22 described myself as a legal expert.</p> <p>23 QUESTIONS BY MR. ERCOLE:</p> <p>24 Q. And you are not an expert in</p> <p>25 epidemiology; is that fair to say?</p>	<p style="text-align: right;">Page 40</p> <p>1 QUESTIONS BY MR. ERCOLE:</p> <p>2 Q. And you wouldn't describe</p> <p>3 yourself as having expertise in statistics;</p> <p>4 is that fair to say?</p> <p>5 MR. LOESER: Objection. Form.</p> <p>6 THE WITNESS: I would describe</p> <p>7 myself as having a functional</p> <p>8 knowledge of statistics as it relates</p> <p>9 to outcomes data, my research</p> <p>10 programs.</p> <p>11 QUESTIONS BY MR. ERCOLE:</p> <p>12 Q. Do you have any specialized</p> <p>13 training with respect to regression analyses?</p> <p>14 MR. LOESER: Objection. Form.</p> <p>15 THE WITNESS: Upon my graduate</p> <p>16 work and my -- from medicine to my</p> <p>17 Ph.D. work to my research, I've</p> <p>18 been -- it's been necessary to review</p> <p>19 papers that have used regression</p> <p>20 analysis in different ways, and so</p> <p>21 I've done some independent reading in</p> <p>22 those areas.</p> <p>23 QUESTIONS BY MR. ERCOLE:</p> <p>24 Q. Other than some independent</p> <p>25 reading, have any expertise with respect to</p>
<p style="text-align: right;">Page 39</p> <p>1 MR. LOESER: Objection. Form.</p> <p>2 THE WITNESS: As part of my</p> <p>3 role, I've become more familiar with</p> <p>4 the results of epidemiologic studies,</p> <p>5 especially in preparation for the</p> <p>6 National Academy of Sciences' report</p> <p>7 as well as preparing reports --</p> <p>8 preparing this particular report.</p> <p>9 QUESTIONS BY MR. ERCOLE:</p> <p>10 Q. Other than --</p> <p>11 A. Other than that, I have no</p> <p>12 additional expertise.</p> <p>13 Q. And you're not an expert in</p> <p>14 mathematics; is that fair to say?</p> <p>15 MR. LOESER: Objection. Form.</p> <p>16 THE WITNESS: I do not have an</p> <p>17 advanced degree in mathematics.</p> <p>18 QUESTIONS BY MR. ERCOLE:</p> <p>19 Q. And you wouldn't call yourself</p> <p>20 an expert in mathematics, correct?</p> <p>21 MR. LOESER: Objection. Form.</p> <p>22 THE WITNESS: I wouldn't</p> <p>23 describe myself having expertise in</p> <p>24 mathematics.</p> <p>25</p>	<p style="text-align: right;">Page 41</p> <p>1 regression analyses?</p> <p>2 MR. LOESER: Objection. Form.</p> <p>3 THE WITNESS: I think that</p> <p>4 describes my experience.</p> <p>5 QUESTIONS BY MR. ERCOLE:</p> <p>6 Q. Have you ever conducted a</p> <p>7 regression analysis?</p> <p>8 A. Ever?</p> <p>9 Q. Yeah.</p> <p>10 A. I have conducted a regression</p> <p>11 analysis as part of my educational process</p> <p>12 and statistical coursework in the past.</p> <p>13 Q. And what is a regression</p> <p>14 analysis?</p> <p>15 A. It's an attempt to make a</p> <p>16 correlation.</p> <p>17 So, for example, if you want to</p> <p>18 make a relationship between like how much you</p> <p>19 eat and how much you weigh, there's a formula</p> <p>20 to try to calculate how tightly that</p> <p>21 relationship is.</p> <p>22 Q. Have you conducted any</p> <p>23 regression analysis with respect to the</p> <p>24 opinions that you are giving in this case?</p> <p>25 MR. LOESER: Object to the</p>

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<p>1 form, and also note that the topic of 2 regression analysis is far outside the 3 scope of the opinions that 4 Dr. Schumacher is providing.</p> <p>5 MR. ERCOLE: Well, fair enough. 6 We may disagree on that, but --</p> <p>7 THE WITNESS: I didn't 8 understand your question.</p> <p>9 QUESTIONS BY MR. ERCOLE:</p> <p>10 Q. Sure. I'll repeat it for you. 11 In connection with the -- I'll 12 repeat it exactly.</p> <p>13 Have you conducted any 14 regression analyses with respect to the 15 opinions that you're giving in this case?</p> <p>16 MR. LOESER: Same objection.</p> <p>17 THE WITNESS: I'm aware that 18 there are certain reviews that contain 19 regression analysis, but I have no 20 opinion on the particular details of 21 those regression analyses.</p> <p>22 QUESTIONS BY MR. ERCOLE:</p> <p>23 Q. Fair enough. 24 And let me -- and my question 25 may be even just a little bit easier than</p>	<p>1 report, I'm going to be referring to that 2 document, or the NASEM committee, I'll be 3 referring to that committee.</p> <p>4 A. Perfect.</p> <p>5 Q. Does that work?</p> <p>6 A. That works for me. Thank you.</p> <p>7 Q. In connection with your work 8 there, did you run any regression analyses?</p> <p>9 MR. LOESER: Objection. Form.</p> <p>10 THE WITNESS: That -- although 11 I did not myself, I know that other 12 committee members had that expertise 13 and focused on that area.</p> <p>14 QUESTIONS BY MR. ERCOLE:</p> <p>15 Q. You are not giving an opinion 16 one way or the other on the validity of any 17 regression analyses that were run with 18 respect to the NASEM report, are you?</p> <p>19 MR. LOESER: Objection to form.</p> <p>20 THE WITNESS: My role as a 21 member of that committee included 22 reviewing the results and conclusions 23 of that report and -- yeah.</p> <p>24 Maybe you should repeat the 25 question again.</p>
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<p>1 that, too, which is: Have you, in connection 2 with any opinions you're giving here today, 3 run a regression analysis?</p> <p>4 MR. LOESER: Objection. Form.</p> <p>5 THE WITNESS: I have not 6 personally run a regression analysis 7 on the information provided as part of 8 the report.</p> <p>9 QUESTIONS BY MR. ERCOLE:</p> <p>10 Q. You've referenced the work you 11 did in connection with the committee on pain 12 management and regulatory strategies. 13 Do you recall that?</p> <p>14 A. I am -- I was a member of that 15 committee and also was a coauthor of that 16 report.</p> <p>17 Q. What can we come up -- what 18 acronym can we come up so that --</p> <p>19 A. How about NASEM?</p> <p>20 Q. NASEM?</p> <p>21 A. Do you mind?</p> <p>22 Q. Okay.</p> <p>23 A. N-A-S-E-M, NASEM.</p> <p>24 Q. N-A-S-E-M, okay.</p> <p>25 So when I refer to the NASEM</p>	<p>1 QUESTIONS BY MR. ERCOLE:</p> <p>2 Q. Yeah, sure.</p> <p>3 A. Sorry. I didn't answer it, 4 apparently.</p> <p>5 Q. Yeah, no problem.</p> <p>6 So my question is: Sitting 7 here today, you're not giving an opinion one 8 way or the other on the validity of any 9 regression analyses that were run with 10 respect to the NASEM report, correct?</p> <p>11 MR. LOESER: Objection. Form.</p> <p>12 THE WITNESS: I'm here to give 13 validity to the conclusions of the 14 NASEM report.</p> <p>15 QUESTIONS BY MR. ERCOLE:</p> <p>16 Q. Right.</p> <p>17 A. And if they're based on 18 regression analysis that were provided in 19 reference material in that report, then I 20 would support that conclusion.</p> <p>21 Q. Did you independently review 22 any regression analyses that were done in the 23 NASEM report?</p> <p>24 A. No, I did not.</p> <p>25 Q. And you didn't conduct any of</p>

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<p>1 right?</p> <p>2 MR. LOESER: Objection. Form.</p> <p>3 THE WITNESS: I don't recall</p> <p>4 reviewing any declarations.</p> <p>5 QUESTIONS BY MR. ERCOLE:</p> <p>6 Q. Okay. Have you received any</p> <p>7 summaries of any analyses or information from</p> <p>8 counsel that you've relied upon in</p> <p>9 formulating your reports?</p> <p>10 MR. LOESER: Objection. Form.</p> <p>11 And again, we're -- answer to</p> <p>12 the extent you can without divulging</p> <p>13 any actual communications between</p> <p>14 yourself and counsel.</p> <p>15 THE WITNESS: I drafted the</p> <p>16 report. I shared it with counsel, who</p> <p>17 provided organizational assistance.</p> <p>18 QUESTIONS BY MR. ERCOLE:</p> <p>19 Q. Okay. So my question is a</p> <p>20 little bit different, which is: In terms of</p> <p>21 formulating your opinions in this case, did</p> <p>22 you receive any summaries of facts or</p> <p>23 information from counsel that formed the</p> <p>24 basis for your opinions in this case?</p> <p>25 MR. LOESER: Objection. Form.</p>	<p>1 from counsel that you considered or relied</p> <p>2 upon in formulating your opinions?</p> <p>3 A. My report is based on my</p> <p>4 research built from my career in the area of</p> <p>5 pain medicine. It was built from my</p> <p>6 knowledge of chronic pain and the difficult</p> <p>7 treatment of chronic pain.</p> <p>8 It relies on review of</p> <p>9 literature that form the foundation of the</p> <p>10 NASEM report, and it is built on the review</p> <p>11 of the literature that came from establishing</p> <p>12 this report.</p> <p>13 Counsel's provided</p> <p>14 organizational support in this report.</p> <p>15 Q. So, sir, do you remember my</p> <p>16 question?</p> <p>17 A. So, no.</p> <p>18 Q. Okay. Dr. Schumacher, you do</p> <p>19 not practice medicine in Ohio, correct?</p> <p>20 A. That is correct.</p> <p>21 Q. You're not licensed to practice</p> <p>22 medicine in Ohio?</p> <p>23 A. That's correct.</p> <p>24 Q. You don't treat patients in</p> <p>25 Ohio?</p>
<p style="text-align: center;">Page 91</p> <p>1 And again, I think we have a --</p> <p>2 so everyone understands the protocol,</p> <p>3 the witness will not be answering any</p> <p>4 questions that require him to divulge</p> <p>5 communications with counsel.</p> <p>6 MR. ERCOLE: Okay. Well --</p> <p>7 MR. LOESER: If you're asking</p> <p>8 him for facts and opinions he relied</p> <p>9 on, those are identified in his</p> <p>10 report.</p> <p>11 MR. ERCOLE: Well, I'm asking</p> <p>12 whether he's been provided any</p> <p>13 summaries that he's -- he's been</p> <p>14 relied upon by counsel.</p> <p>15 MR. LOESER: And the witness is</p> <p>16 not going to answer any question about</p> <p>17 communications with counsel except for</p> <p>18 those on which he relied in forming</p> <p>19 his opinions.</p> <p>20 MR. LEVINE: For the record,</p> <p>21 it's "considered," not "relied upon."</p> <p>22 QUESTIONS BY MR. ERCOLE:</p> <p>23 Q. Yeah. I mean, that's my</p> <p>24 question.</p> <p>25 Did you receive any summaries</p>	<p style="text-align: center;">Page 93</p> <p>1 A. Treat patients physically in</p> <p>2 Ohio?</p> <p>3 Q. Sure.</p> <p>4 A. I've certainly treated patients</p> <p>5 from Ohio.</p> <p>6 Q. How many patients have you</p> <p>7 treated from Ohio?</p> <p>8 A. It's hard to recall.</p> <p>9 Q. Okay. Have you ever spoken</p> <p>10 with any -- strike that.</p> <p>11 Did you speak with any Ohio</p> <p>12 doctors in any field of medicine for purposes</p> <p>13 of forming the opinions that you're giving in</p> <p>14 this case?</p> <p>15 A. Not that I'm aware.</p> <p>16 Q. Did you ever conduct any survey</p> <p>17 or study of Ohio doctors for purposes of</p> <p>18 formulating your opinions in this case?</p> <p>19 MR. LOESER: Objection. Form.</p> <p>20 THE WITNESS: I have not</p> <p>21 personally prepared surveys of -- I'm</p> <p>22 sorry, I lost the last part of that</p> <p>23 question.</p> <p>24 QUESTIONS BY MR. ERCOLE:</p> <p>25 Q. Sure, I'll repeat it.</p>

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<p style="text-align: right;">Page 94</p> <p>1 Did you ever conduct any survey 2 or study of Ohio doctors for purposes of 3 formulating your opinions in this case? 4 A. No, I did not. 5 MR. LOESER: Objection. 6 QUESTIONS BY MR. ERCOLE: 7 Q. And so you've never spoken with 8 any Ohio doctors to ask them, for instance, 9 why they may have written an opioid 10 prescription for patients; fair to say? 11 MR. LOESER: Objection. Form. 12 THE WITNESS: My exposure to 13 Ohio doctors would be represented by 14 statements they made in the call notes 15 that were part of the report as 16 examples of misstatements from the 17 pharmaceutical sales reps to such 18 doctors. 19 QUESTIONS BY MR. ERCOLE: 20 Q. And that's the extent of your 21 exposure to Ohio doctors? 22 MR. LOESER: Objection. Form. 23 THE WITNESS: Relative to this 24 report. 25</p>	<p>1 been prescribed? 2 MR. LOESER: Objection. Form. 3 THE WITNESS: I can't recall. 4 QUESTIONS BY MR. ERCOLE: 5 Q. How about this: Did you ever 6 speak with any patient in Ohio who received 7 an opioid prescription in formulating any of 8 your opinions in this case? 9 A. Not that I'm aware of. 10 Q. Sitting here today, can you 11 identify any Ohio prescriber who wrote an 12 opioid prescription because of a statement 13 that you contend was false that an opioid 14 manufacturer made? 15 A. Well, I would refer to some of 16 the exhibits that I put in the report as 17 potential examples where following a 18 misstating -- a misleading statement made by 19 a pharmaceutical representative, that the 20 sales representative then states that they 21 have gotten assurance from that doctor that 22 they would now write for a higher-dose, 23 long-acting opioid, for example. 24 Those are some of the examples 25 that I included in the report.</p>
<p style="text-align: right;">Page 95</p> <p>1 QUESTIONS BY MR. ERCOLE: 2 Q. Sure. 3 Relative to the opinions -- 4 A. Yeah. 5 Q. -- you're giving in this case, 6 right? 7 A. That's correct. 8 Q. Have you conducted any survey 9 or study of Ohio patients to understand 10 whether they've benefitted from opioids that 11 they've been prescribed? 12 MR. LOESER: Objection. Form. 13 THE WITNESS: Relative to 14 developing my own survey or analysis 15 of opioid use for people in -- taking 16 opioids in Ohio, there may be overlap 17 in some of the reference material that 18 I used that if there were surveys done 19 in those papers, but I've not done 20 myself. 21 QUESTIONS BY MR. ERCOLE: 22 Q. Are you familiar with any 23 survey that you can -- that you can recall 24 today that evaluates whether patients in Ohio 25 have benefitted from opioids that they've</p>	<p>1 Q. So what exhibit are you 2 referring to? 3 A. If you give me a moment, 4 please. 5 Q. Actually, for clarity of the 6 record, you are looking in Exhibit 1, 7 correct? 8 A. Yes, that's correct. 9 Q. Okay. And what exhibit in 10 Exhibit 1 are you referring to? 11 Not in the sense of the Bates 12 number, in the sense of the -- if you look at 13 the first page, there should be an exhibit. 14 MR. LOESER: It's his report. 15 THE WITNESS: It's within my 16 report, yeah, sorry. 17 So, for example, on page 36 of 18 my report there's a note, July 6, 2000 19 note, from Ohio, quote: "Spoke with 20 MD who expressed concern re: one 21 patient receiving 120 milligrams every 22 12 hours for back pain. Discussed 23 with the provider that there was no 24 ceiling dose with oxy like 25 short-acting. He seemed to think that</p>

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<p style="text-align: right;">Page 162</p> <p>1 A. I see that. You've read it 2 correctly. 3 Q. You wrote that, right? 4 A. It was -- again, this was a 5 collaborative effort with Dr. Ramana Naidu 6 and myself. 7 Q. The next bullet is lack of 8 formal research on the risks and benefits of 9 chronic opioid use. 10 Do you see that? 11 A. That's read correctly. 12 Q. That's another factor that you 13 identified as causing or contributing to the 14 opioid epidemic in this article? 15 MR. LOESER: Objection. Form. 16 THE WITNESS: Again, I wouldn't 17 phrase it in the way you've said it, 18 that if we go back to the start of 19 this, it was meant to be a provocative 20 statement as where did opioid epidemic 21 come from. 22 And as you see as we work our 23 way down, we land on pharmaceutical 24 direct-to-consumer marketing, 25 direct-to-prescriber marketing.</p>	<p style="text-align: right;">Page 164</p> <p>1 QUESTIONS BY MR. ERCOLE: 2 Q. I'll rephrase the question. 3 When you authored this 4 document, Exhibit 5, in September of 20 -- 5 2016, had you reviewed any marketing 6 materials from any pharmaceutical company? 7 MR. LOESER: Objection. Form. 8 THE WITNESS: I can't recall. 9 QUESTIONS BY MR. ERCOLE: 10 Q. So sitting here today, you 11 can't identify a single marketing material or 12 document that you would have reviewed in 13 publishing an article on the Internet in 14 September of 2016 saying that pharmaceutical 15 marketing is a cause of the opioid epidemic? 16 MR. LOESER: Objection. Form. 17 THE WITNESS: Again, my 18 statement in this article poses the 19 question and lists potential factors. 20 It -- that's what I have to say. 21 QUESTIONS BY MR. ERCOLE: 22 Q. And have you done any -- well, 23 let me ask this: How about the FDA -- strike 24 that. 25 How about FDA policy? Was that</p>
<p style="text-align: right;">Page 163</p> <p>1 Again, it's my opinion that 2 that represents the driving force for 3 the opioid epidemic. 4 QUESTIONS BY MR. ERCOLE: 5 Q. So the -- I believe you -- the 6 pain management and regulatory strategies 7 report that you've mentioned -- 8 A. Yes. 9 Q. -- that was published in 2017, 10 correct? 11 A. That's correct, yes. 12 Q. And so this document was 13 published in -- or authored in September 14 of 2016, correct? If you look at the first 15 page. 16 MR. LOESER: Objection. Form. 17 THE WITNESS: September, yes. 18 QUESTIONS BY MR. ERCOLE: 19 Q. Right. 20 A. That's correct, yes. 21 Q. So fair to say that you were 22 including -- well, had you reviewed any 23 marketing materials by any company when you 24 authored this document, Exhibit 5? 25 MR. LOESER: Objection. Form.</p>	<p style="text-align: right;">Page 165</p> <p>1 a factor in causing or contributing to the 2 opioid epidemic in Ohio? 3 MR. LOESER: Objection. Form, 4 and outside the scope of his report. 5 THE WITNESS: My report was -- 6 and scope does not involve making 7 opinion about the FDA's process for 8 drug approval. 9 QUESTIONS BY MR. ERCOLE: 10 Q. Did you consider that? 11 MR. LOESER: Objection. Form. 12 THE WITNESS: In what way? 13 QUESTIONS BY MR. ERCOLE: 14 Q. Did you consider that in 15 authoring the opinions that you're giving, 16 that -- you just said it was outside the 17 scope of your opinion. So is it fair to say 18 that you're not giving an opinion on that 19 issue? 20 A. My opinion is based on the lack 21 of scientific integrity that underpinned the 22 claims made by the pharmaceutical industry 23 that opioids, chronic opioids, were safe and 24 effective for the treatment of chronic pain. 25 I'm not making an opinion on</p>

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<p>1 the process of the FDA.</p> <p>2 Q. Are you giving -- did you</p> <p>3 consider whether DEA policy caused or</p> <p>4 contributed to the opioid epidemic in Ohio?</p> <p>5 MR. LOESER: Objection. Form.</p> <p>6 Outside the scope of his report.</p> <p>7 QUESTIONS BY MR. ERCOLE:</p> <p>8 Q. Let me ask this: Is it outside</p> <p>9 the scope of your report as to whether or not</p> <p>10 you considered whether DEA policy caused or</p> <p>11 contributed to the opioid epidemic in Ohio?</p> <p>12 MR. LOESER: Objection. Form.</p> <p>13 THE WITNESS: That was outside</p> <p>14 the scope of my report.</p> <p>15 QUESTIONS BY MR. ERCOLE:</p> <p>16 Q. Fair enough.</p> <p>17 And is it outside the scope of</p> <p>18 your report as to whether or not you</p> <p>19 considered whether FDA policy caused or</p> <p>20 contributed to the opioid epidemic in Ohio?</p> <p>21 MR. LOESER: Objection. Form.</p> <p>22 THE WITNESS: Again, it was</p> <p>23 outside the --</p> <p>24 MR. LOESER: Compound.</p> <p>25 THE WITNESS: -- scope of my</p>	<p>1 inactions taken by local government caused or</p> <p>2 contributed to the opioid epidemic in Ohio?</p> <p>3 MR. LOESER: Objection. Form.</p> <p>4 THE WITNESS: Within my</p> <p>5 opinion, there was evidence within the</p> <p>6 literature of the influence of</p> <p>7 pharmaceutical industries to try to</p> <p>8 change certain rules at the state</p> <p>9 level having to do with the approval</p> <p>10 and prescribing practices of opioids.</p> <p>11 But otherwise, the rest is --</p> <p>12 otherwise, your question is outside</p> <p>13 the scope of my report.</p> <p>14 QUESTIONS BY MR. ERCOLE:</p> <p>15 Q. Did you consider whether Summit</p> <p>16 or Cuyahoga -- excuse me.</p> <p>17 Did you consider whether Summit</p> <p>18 or Cuyahoga Counties -- strike that.</p> <p>19 Did you consider whether Ohio's</p> <p>20 decision when or when not to implement a PDMP</p> <p>21 caused or contributed to the opioid epidemic</p> <p>22 in Ohio?</p> <p>23 MR. LOESER: Objection. Form.</p> <p>24 Outside the scope of his report.</p> <p>25 Assumes facts not in evidence.</p>
<p>1 report.</p> <p>2 QUESTIONS BY MR. ERCOLE:</p> <p>3 Q. And is it fair to say -- is it</p> <p>4 outside the scope of your report as to</p> <p>5 whether or not you considered whether managed</p> <p>6 care or reimbursement policies by managed</p> <p>7 care entities caused or contributed to the</p> <p>8 opioid epidemic in Ohio?</p> <p>9 MR. LOESER: Objection. Form.</p> <p>10 It's outside the scope of his report.</p> <p>11 THE WITNESS: Yeah, I -- that</p> <p>12 was outside the scope of my report.</p> <p>13 QUESTIONS BY MR. ERCOLE:</p> <p>14 Q. Is it outside the scope of your</p> <p>15 report as to whether or not you considered</p> <p>16 whether pill mills caused or contributed to</p> <p>17 the opioid epidemic in Ohio?</p> <p>18 MR. LOESER: Objection. Form.</p> <p>19 Outside the scope of his report.</p> <p>20 THE WITNESS: Yeah. I do not</p> <p>21 consider that. That was outside the</p> <p>22 scope of my report.</p> <p>23 QUESTIONS BY MR. ERCOLE:</p> <p>24 Q. Was it outside the scope of</p> <p>25 your report as to whether or not actions or</p>	<p>1 THE WITNESS: As part of the</p> <p>2 NASEM report, there was a section in</p> <p>3 which we examined the pattern of the</p> <p>4 institution of these prescription</p> <p>5 medication reporting systems, and so</p> <p>6 broadly we examined different states'</p> <p>7 record of that and whether there was a</p> <p>8 relationship between the institution</p> <p>9 of those tools for physicians and</p> <p>10 potential rates of opioid abuse or</p> <p>11 harm.</p> <p>12 I do reference the NASEM report</p> <p>13 in my core opinion, but that is as far</p> <p>14 as I have. I don't have anything</p> <p>15 specific for Ohio.</p> <p>16 QUESTIONS BY MR. ERCOLE:</p> <p>17 Q. So you don't know one way or</p> <p>18 the other --</p> <p>19 A. I can't recall.</p> <p>20 Q. Let me just -- let me just</p> <p>21 finish.</p> <p>22 You don't know sitting here</p> <p>23 today, one way or another, whether Ohio</p> <p>24 implemented a PDMP or not?</p> <p>25 MR. LOESER: Objection.</p>

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<p>1 Outside the scope of his report.</p> <p>2 THE WITNESS: It's outside the</p> <p>3 scope for the -- your question.</p> <p>4 QUESTIONS BY MR. ERCOLE:</p> <p>5 Q. And fair to say you didn't</p> <p>6 consider the timing of -- strike that.</p> <p>7 Fair to say you didn't consider</p> <p>8 whether Ohio implemented a PDMP and, if so,</p> <p>9 the timing of it in determining whether that</p> <p>10 contributed or caused the opioid epidemic in</p> <p>11 Ohio?</p> <p>12 MR. LOESER: Same objection.</p> <p>13 THE WITNESS: The context of</p> <p>14 the prescription medication reporting</p> <p>15 system has been, in my practice, a</p> <p>16 tool to try to identify warning signs</p> <p>17 of patients if they're prescribed</p> <p>18 something and taking something else.</p> <p>19 Again, the overall impact of</p> <p>20 the record is a tool, but I can't</p> <p>21 recall the details at this time that</p> <p>22 relate the starting of the -- of that</p> <p>23 recording program in the state of</p> <p>24 Ohio.</p> <p>25</p>	<p>1 serious case, right?</p> <p>2 A. That's why I'm here.</p> <p>3 Q. Right.</p> <p>4 So did you consider, in giving</p> <p>5 your opinions as to what caused or didn't</p> <p>6 cause the opioid epidemic, the misuse of</p> <p>7 opioids by patients in Ohio?</p> <p>8 MR. LOESER: Objection.</p> <p>9 Assumes facts not in evidence. It's</p> <p>10 outside the scope of his report.</p> <p>11 THE WITNESS: My consideration</p> <p>12 weighed on the effect of opioids on</p> <p>13 the entire population of the United</p> <p>14 States, at least that represented by</p> <p>15 different study groups as represented</p> <p>16 in the literature.</p> <p>17 QUESTIONS BY MR. ERCOLE:</p> <p>18 Q. Did you consider the factor of</p> <p>19 misuse of opioids by patients in determining</p> <p>20 what caused or didn't cause the opioid</p> <p>21 epidemic in Ohio?</p> <p>22 And with all due respect, I</p> <p>23 don't think you've answered that question.</p> <p>24 MR. LOESER: Objection. Form.</p> <p>25 Asked and answered several times.</p>
<p style="text-align: center;">Page 171</p> <p>1 QUESTIONS BY MR. ERCOLE:</p> <p>2 Q. Did you consider whether the</p> <p>3 misuse by -- strike that.</p> <p>4 Did you consider whether the</p> <p>5 misuse of opioids by patients in Ohio caused</p> <p>6 or contributed to the opioid epidemic there?</p> <p>7 MR. LOESER: Objection. Form.</p> <p>8 Outside the scope of his report.</p> <p>9 THE WITNESS: Again, the core</p> <p>10 of the opinion was based on a review</p> <p>11 of the literature that -- pulled from</p> <p>12 various studies that had been done</p> <p>13 across the country. I can't recall</p> <p>14 which of those studies specifically</p> <p>15 included cohorts from the state of</p> <p>16 Ohio.</p> <p>17 QUESTIONS BY MR. ERCOLE:</p> <p>18 Q. Sir, I'm just trying to</p> <p>19 understand what you considered and didn't</p> <p>20 consider --</p> <p>21 A. Sure.</p> <p>22 Q. -- in forming the opinions that</p> <p>23 you're purporting to give in this case.</p> <p>24 A. Uh-huh.</p> <p>25 Q. And you agree this case is a</p>	<p style="text-align: center;">Page 173</p> <p>1 THE WITNESS: Again, my opinion</p> <p>2 is that the factors that are driving</p> <p>3 the opioid epidemic, as we've</p> <p>4 discussed, and the powerful force</p> <p>5 behind the epidemic was driven by the</p> <p>6 pharmaceutical industry, and those</p> <p>7 factors and conditions existed across</p> <p>8 the country and would not be</p> <p>9 necessarily unique to Ohio.</p> <p>10 That's my opinion.</p> <p>11 MR. ERCOLE: Okay. I'll move</p> <p>12 to strike that response as</p> <p>13 nonresponsive.</p> <p>14 MR. LOESER: I object. I</p> <p>15 believe that answer was responsive and</p> <p>16 shouldn't be stricken.</p> <p>17 QUESTIONS BY MR. ERCOLE:</p> <p>18 Q. Okay. Sir, have you done any</p> <p>19 quantitative analysis to try to apportion</p> <p>20 responsibility -- strike that.</p> <p>21 We talked about -- well, you</p> <p>22 identify in your September 20, 2016 article a</p> <p>23 number of factors that, according to this</p> <p>24 article, you say the opioid epidemic came</p> <p>25 from, right?</p>

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<p>1 A. Actually, the phrasing is 2 "Where did the opioid epidemic come from?" 3 Q. Right. 4 A. "Did it come from the 5 following?" 6 And so it was posed as a 7 question. "To put it succinctly, from the 8 following." 9 Yeah. "So finally, where did 10 the opioid epidemic come from," question 11 mark? 12 "To put it succinctly, from the 13 following." 14 Right. 15 Q. Right. 16 A. So it is intended to engage the 17 reader to consider these conditions, that's 18 correct. 19 Q. Okay. Did you do anything to 20 try to apportion responsibility for the 21 opioid crisis in Ohio according to any of 22 these conditions or factors? 23 MR. LOESER: Objection. 24 Mischaracterizes his prior testimony, 25 and form.</p>	<p>1 evidence provided by counsel that 2 there were call note reports that were 3 describing efforts by the 4 pharmaceutical industry to influence 5 physician prescribing behavior 6 specifically about the use of higher 7 doses of chronic opioids. 8 Given that, I have not 9 conducted any other survey or 10 analysis. 11 QUESTIONS BY MR. ERCOLE: 12 Q. Right. 13 You didn't survey Ohio -- you 14 didn't actually survey -- conduct and 15 initiate and oversee a survey of Ohio 16 prescribers to figure out whether they 17 received any misleading marketing and, if so, 18 whether that influenced their 19 decision-making, right? 20 MR. LOESER: Objection. Form, 21 and asked and answered. 22 THE WITNESS: As best of my 23 knowledge, I have not conducted a 24 survey for -- in the Ohio area to 25 survey physicians in that regards.</p>
<p style="text-align: center;">Page 175</p> <p>1 THE WITNESS: I have not 2 personally conducted an analysis to 3 apportion responsibility amongst these 4 various factors. 5 (Schumacher Exhibit 6 marked 6 for identification.) 7 QUESTIONS BY MR. ERCOLE: 8 Q. Sir, last document I'm going to 9 show you. Let's mark this as Exhibit 6. 10 MR. LOESER: Take your time. 11 QUESTIONS BY MR. ERCOLE: 12 Q. Sir, we talked before. You 13 have not conducted any survey of 14 physicians -- strike that. 15 You haven't -- sorry. 16 I talked to you before. You 17 have not conducted any survey of prescribers 18 in Ohio to figure out whether they received 19 any misleading marketing by defendants and, 20 if so, whether they relied upon that 21 marketing, correct? 22 MR. LOESER: Objection. Form. 23 Mischaracterizes his testimony. 24 THE WITNESS: What I have 25 testified at this deposition is the</p>	<p style="text-align: center;">Page 177</p> <p>1 QUESTIONS BY MR. ERCOLE: 2 Q. So the title of this document 3 is "Surveying Ohio Physicians on Opioid 4 Prescribing Behaviors." 5 Do you see that? 6 A. I do. 7 Q. Have you ever seen this 8 document before? 9 A. I don't recall seeing this 10 document. 11 When was this -- I can't answer 12 the question, sorry. 13 Can I ask a question: When was 14 this published? 15 Q. Yeah. 16 So, unfortunately, we're here 17 to -- for me to ask questions. 18 A. No, that's okay. 19 Q. And I'm just asking whether 20 you've seen it. 21 A. Okay. I can't recall seeing 22 this. 23 Q. You don't recall your counsel 24 ever giving you this document? 25 MR. LOESER: Objection.</p>

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<p>1 We're not going to talk about 2 anything that may or may not have been 3 provided to him that's not considered 4 or relied on in his report.</p> <p>5 THE WITNESS: I don't --</p> <p>6 MR. LOESER: You can ask him 7 all you want about the document. 8 You're just not going to ask him 9 about --</p> <p>10 MR. ERCOLE: You can -- just 11 make your objection, and then we'll go 12 from there.</p> <p>13 MR. LOESER: Well, it's more 14 than making an objection. It's an 15 instruction not to answer questions 16 about communications with counsel.</p> <p>17 MR. ERCOLE: Then just instruct 18 him not to answer. If that's your -- 19 if that's your -- what you're going to 20 argue.</p> <p>21 MR. LOESER: I'm instructing 22 the witness not to answer. However, 23 you can ask whatever question you want 24 about the document; just don't ask 25 anything that I or my colleagues may</p>	<p>1 A. I see that you've -- 2 Q. I read that right. 3 A. -- correctly read that. 4 Q. Yeah. Okay.</p> <p>5 And if this was a survey 6 conducted by the State of Ohio regarding 7 opioid prescribing behavior and what 8 prescriptions rely upon when prescribing 9 opioids in Ohio, would you have want to have 10 seen this document before issuing your 11 opinions here today?</p> <p>12 MR. LOESER: Objection. Form. 13 The exhibit lacks foundation, and this 14 is outside the scope of his report.</p> <p>15 THE WITNESS: Well, before 16 rendering an opinion about two 17 sentences from the summary, I would 18 need to understand the sponsor of this 19 survey. I would need an opportunity 20 to review the survey's methodologies 21 and look at their results prior to 22 stating an opinion.</p> <p>23 QUESTIONS BY MR. ERCOLE: 24 Q. Fair enough. 25 And at least -- and I'm not</p>
<p style="text-align: center;">Page 179</p> <p>1 have said to the witness about the 2 document.</p> <p>3 QUESTIONS BY MR. ERCOLE: 4 Q. So you just don't recall seeing 5 this document before?</p> <p>6 A. That's correct, yeah.</p> <p>7 Q. Okay. And it's not something 8 you relied on or considered in your report, 9 right?</p> <p>10 A. I don't recall relying on this 11 document.</p> <p>12 Q. Can you turn to the -- I just 13 have one or two questions, and then we'll 14 take a break.</p> <p>15 Can you turn to the page marked 16 SUMMIT_000839799?</p> <p>17 A. Okay.</p> <p>18 Q. And -- one second.</p> <p>19 Do you see where in the summary 20 section on the second sentence it says, 21 "Certain factors such as employer 22 reimbursement policies and pharmaceutical 23 marketing did not overtly change opiate 24 prescribing habits"?</p> <p>25 Do you see that?</p>	<p style="text-align: center;">Page 181</p> <p>1 asking you to do that now. I'm just saying 2 fair enough.</p> <p>3 But you have not -- in 4 connection with your opinions in this case 5 that are contained in Exhibit 1, you did not 6 do that, right?</p> <p>7 MR. LOESER: Objection. Form. 8 THE WITNESS: I don't recall 9 ever reviewing this document before.</p> <p>10 MR. ERCOLE: Thank you. So can 11 we take a three-minute break?</p> <p>12 MR. LOESER: Three?</p> <p>13 MR. ERCOLE: We can take a very 14 short break, if that's okay.</p> <p>15 THE WITNESS: Yeah, sure.</p> <p>16 VIDEOGRAPHER: We are now going 17 off the record, and the time is 18 2:13 p.m. 19 (Off the record at 2:13 p.m.)</p> <p>20 VIDEOGRAPHER: We are now going 21 back on the record, and the time is 22 2:25 p.m.</p> <p>23 MR. ERCOLE: Dr. Schumacher, 24 thank you for your time with me, at 25 least.</p>

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<p>1 That being said, I'm going to 2 pass the witness to one of the 3 codefendants here and reserve the 4 right to ask additional questions as 5 appropriate based upon further 6 developments in the deposition. 7 Thanks.</p> <p>8 CROSS-EXAMINATION</p> <p>9 QUESTIONS BY MR. MOONEY:</p> <p>10 Q. Good afternoon, Dr. Schumacher.</p> <p>11 A. Good afternoon.</p> <p>12 Q. My name is Matt Mooney. I'm an attorney with the law firm of Williams & Connolly, and I represent Cardinal Health, one of the defendants in this case.</p> <p>13 Excuse me. I have a couple of questions just right off the bat.</p> <p>14 On page 6 of your report, in footnote 1 -- are you there?</p> <p>15 A. Yes.</p> <p>16 Q. You write, "Defendants" as used herein refers to the defendant manufacturers of branded and generic opioid products in the actions brought by plaintiffs Cuyahoga County and Summit County, Purdue</p>	<p>1 your report as defendants; is that true?</p> <p>2 A. I have not included -- is it</p> <p>3 Cardinal?</p> <p>4 Q. It is Cardinal, but I'm asking</p> <p>5 more -- I'm asking more specifically.</p> <p>6 A. Uh-huh.</p> <p>7 Q. Do you have an opinion about</p> <p>8 any of the other defendants that have been</p> <p>9 named in this litigation that you intend to</p> <p>10 offer at trial beyond the ones that you have</p> <p>11 listed as defendants in footnote 1?</p> <p>12 A. My opinion is -- for this</p> <p>13 report is listed here as the defendants in</p> <p>14 footnote 1.</p> <p>15 Q. Okay. You don't have a</p> <p>16 specific opinion about the actions of</p> <p>17 Cardinal Health as it relates to this</p> <p>18 litigation, correct?</p> <p>19 A. I have not -- in my report, I</p> <p>20 have not provided a focused opinion about</p> <p>21 Cardinal Health.</p> <p>22 Q. And you're not going to offer</p> <p>23 an opinion at trial about Cardinal Health</p> <p>24 specifically, correct?</p> <p>25 A. It's my understanding that my</p>
<p style="text-align: center;">Page 183</p> <p>1 Pharma, Endo, Janssen, Teva, Cephalon, Mallinckrodt, Actavis and Allergan."</p> <p>2 Did I read that correctly?</p> <p>3 A. You read that correctly.</p> <p>4 Q. Okay. Are the opinions in your report and that you will offer in this litigation limited to the defendant manufacturers that you list in footnote 1 of your report?</p> <p>5 A. My opinions that are listed in the report are intended to be a broad-based opinion to the effect of pharmaceutical industry and industry in general that's it's promoted the use of opioids for chronic noncancer pain without scientific evidence.</p> <p>6 Q. Okay. So is the answer to my question, "no," the opinions in your report and that you intend to offer in this litigation extend to defendants beyond the ones that you list in footnote 1 of your report?</p> <p>7 A. I have no opinion about that.</p> <p>8 Q. You don't have an opinion about whether or not your opinion applies to defendants beyond the ones you've listed in</p>	<p style="text-align: center;">Page 185</p> <p>1 testimony is -- within scope relates to this report.</p> <p>2 Q. Okay. And --</p> <p>3 MR. LOESER: Counsel, just so the record's clear on these defendants listed here, there's been no effort to identify the affiliates and subsidiaries.</p> <p>4 So provided you're talking about, you know, within that family the companies, that's what that is intended --</p> <p>5 QUESTIONS BY MR. MOONEY:</p> <p>6 Q. When you used the word "Purdue Pharma" in this report, are you referring to Purdue Pharmaceuticals and its affiliates?</p> <p>7 A. That's correct.</p> <p>8 Q. Okay. I'm working with that same definition then.</p> <p>9 A. Okay.</p> <p>10 Q. To the extent that any of these seven -- eight entities listed have</p> <p>11 affiliates or subsidiaries that have been</p> <p>12 listed as defendants, you may offer opinions</p> <p>13 about them, but not outside of those</p>

<p style="text-align: right;">Page 202</p> <p>1 Walmart was a defendant in this litigation?</p> <p>2 A. I was not aware.</p> <p>3 Q. Were you aware on March 25,</p> <p>4 2019, when you completed your report that</p> <p>5 Giant Eagle stores was a defendant in this</p> <p>6 litigation?</p> <p>7 A. I was not aware.</p> <p>8 MR. LOESER: Were you aware</p> <p>9 that there was such a thing as Giant</p> <p>10 Eagle stores?</p> <p>11 QUESTIONS BY MR. LAVELLE:</p> <p>12 Q. Yes. Well, counsel asked a</p> <p>13 good question; I'm going to ask the same one.</p> <p>14 You never heard of Giant Eagle</p> <p>15 stores?</p> <p>16 A. That was the top of my mind,</p> <p>17 actually. I'd never heard of that before.</p> <p>18 Fair enough, yeah.</p> <p>19 Q. All right. Fair enough.</p> <p>20 A. Yeah.</p> <p>21 Q. So you looked earlier in the</p> <p>22 deposition at your report, which you have in</p> <p>23 front of you, right?</p> <p>24 A. Yes, I do.</p> <p>25 Q. And you've got on page 6 a</p>	<p style="text-align: right;">Page 204</p> <p>1 A. Uh-huh.</p> <p>2 Q. -- you are not referring to any</p> <p>3 of the retail chain pharmacies; is that</p> <p>4 right?</p> <p>5 A. The retail chain pharmacies</p> <p>6 were outside the scope of preparation of my</p> <p>7 report.</p> <p>8 Q. So the answer to my question</p> <p>9 is, yes, you are not referring to them; is</p> <p>10 that right?</p> <p>11 A. I have not referred to those</p> <p>12 companies in my report. They're outside the</p> <p>13 scope of my report preparation.</p> <p>14 Q. Are you aware of the basis on</p> <p>15 which plaintiffs have asserted claims against</p> <p>16 any of the retail chain pharmacies?</p> <p>17 A. Only relative to my own reading</p> <p>18 in the media. But I have not discussed</p> <p>19 such -- well, I can't reveal discussions with</p> <p>20 counsel, but, again -- I'm sorry, could you</p> <p>21 repeat your question?</p> <p>22 Q. Sure.</p> <p>23 And I understand you may be</p> <p>24 getting confused here. I'm not asking for</p> <p>25 communications you had with your counsel.</p>
<p style="text-align: right;">Page 203</p> <p>1 footnote, footnote 1, that refers to</p> <p>2 defendants and defines defendants; is that</p> <p>3 right?</p> <p>4 A. That is correct.</p> <p>5 Q. And your definition of</p> <p>6 defendants excludes all of the pharmacies</p> <p>7 that we just mentioned; is that right?</p> <p>8 MR. LOESER: Objection. Form.</p> <p>9 THE WITNESS: Those pharmacies</p> <p>10 do not appear as this footnote.</p> <p>11 QUESTIONS BY MR. LAVELLE:</p> <p>12 Q. So throughout your report, when</p> <p>13 you referred to defendants, you are not</p> <p>14 referring to any of the chain pharmacies; is</p> <p>15 that right?</p> <p>16 A. Within the report I have used</p> <p>17 wording that is broad and refers to the</p> <p>18 pharmaceutical industry. In that regards,</p> <p>19 that's the breadth of that.</p> <p>20 However, the defendants as</p> <p>21 listed do not include the companies you just</p> <p>22 mentioned.</p> <p>23 Q. So just to be clear, Doctor,</p> <p>24 when you refer in your March 25, 2019 expert</p> <p>25 report to defendants --</p>	<p style="text-align: right;">Page 205</p> <p>1 I'm just asking what your understanding is.</p> <p>2 As you sit here today on</p> <p>3 April 23, 2019, do you have an understanding</p> <p>4 of why plaintiffs have asserted claims or</p> <p>5 what the claims are that the plaintiffs have</p> <p>6 asserted against the retail chain pharmacies?</p> <p>7 A. That's outside the scope of my</p> <p>8 report. I have no opinion in that matter.</p> <p>9 Q. But do you have an</p> <p>10 understanding of what the claims are against</p> <p>11 them?</p> <p>12 A. No, I do not.</p> <p>13 Q. Do you have an understanding</p> <p>14 today as to whether they have been sued for</p> <p>15 dispensing as opposed to distribution?</p> <p>16 A. I don't know.</p> <p>17 Q. Do you know whether any of the</p> <p>18 pharmacies I've mentioned earlier, Rite Aid,</p> <p>19 CVS, Walmart, Walgreens, Giant Eagle, whether</p> <p>20 they, in fact, distribute opioids or have</p> <p>21 distributed opioids?</p> <p>22 A. Within the -- preparing for</p> <p>23 this report, I have no evidence other than</p> <p>24 just from personal knowledge of being a</p> <p>25 physician and knowing that certain pharmacies</p>

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<p>1 opioids in the treatment of chronic 2 noncancer pain where there's no strong 3 literature that supports its use in 4 things like back pain, centralized 5 pain syndromes or headache, in my 6 opinion, underpin the driving force of 7 the opioid epidemic.</p> <p>8 QUESTIONS BY MR. LEVINE:</p> <p>9 Q. So let me be more specific. 10 Can you say that any patient 11 who was prescribed an Endo product would not 12 have otherwise been prescribed a different 13 opioid had Endo not marketed and sold their 14 products?</p> <p>15 MR. LOESER: Objection. Form. 16 Calls for speculation.</p> <p>17 THE WITNESS: I don't know.</p> <p>18 QUESTIONS BY MR. LEVINE:</p> <p>19 Q. Have you ever been detailed by 20 any Endo sales representative or marketing 21 person?</p> <p>22 A. I can't recall.</p> <p>23 Q. Do you recall ever telling any 24 Endo sales representative or marketing person 25 whether their marketing was too aggressive,</p>	<p>1 conference to tell your colleagues that they 2 were being misled by other people's 3 marketing?</p> <p>4 A. I have made presentations that 5 have been based on the work of the NASEM 6 report that -- which the key thesis or the 7 key cause, conclusion, was the aggressive 8 promotion of opiates for noncancer chronic 9 pain. And within presentations, I have made 10 that reference to our study's conclusion.</p> <p>11 Q. Have you ever prescribed Opana 12 or Opana ER?</p> <p>13 A. No, I have not. It's not 14 within our formulary at UCSF.</p> <p>15 Q. Have you ever prescribed 16 Percocet?</p> <p>17 A. As part of our consult service, 18 we have prescribed Percocet to patients, 19 that's correct.</p> <p>20 Q. Do you continue to prescribe 21 Percocet?</p> <p>22 A. Based on the patient's history. 23 Often patients may come in with a history of 24 already taking Percocets, and depending on 25 the clinical situation, we -- and discussions</p>
<p>1 improper or misleading?</p> <p>2 A. I don't recall ever doing that.</p> <p>3 Q. You never told anyone at Endo 4 that their promotion of opioids was improper, 5 did you?</p> <p>6 MR. LOESER: Objection. Form.</p> <p>7 THE WITNESS: I don't recall 8 doing that.</p> <p>9 QUESTIONS BY MR. LEVINE:</p> <p>10 Q. Did you ever tell your 11 colleagues at UCSF that Endo's marketing was 12 improper?</p> <p>13 MR. LOESER: Objection. Form. 14 Outside the scope of his report.</p> <p>15 THE WITNESS: I don't recall.</p> <p>16 QUESTIONS BY MR. LEVINE:</p> <p>17 Q. Did you ever present at a 18 medical conference to tell your colleagues 19 that they were being misled by Endo's 20 marketing?</p> <p>21 MR. LOESER: Objection. Form. 22 THE WITNESS: No, I don't 23 recall ever doing that.</p> <p>24 QUESTIONS BY MR. LEVINE:</p> <p>25 Q. Ever present at a medical</p>	<p>1 with them, we may continue that medication. 2 So we would either give a recommendation or 3 if the prescribing pattern is under our 4 control, we would write for that 5 prescription.</p> <p>6 Q. Have you ever prescribed 7 Percocet based on marketing?</p> <p>8 MR. LOESER: Objection. Form.</p> <p>9 THE WITNESS: The decision to 10 prescribe Percocet has been -- within 11 the inpatient services has typically 12 been driven by a patient's particular 13 history of analgesic use and in 14 certain circumstances their ability to 15 tolerate different opioids, including 16 Percocet.</p> <p>17 QUESTIONS BY MR. LEVINE:</p> <p>18 Q. Sorry, I don't believe you 19 answered my question.</p> <p>20 A. I'm sorry, could you repeat 21 that?</p> <p>22 Q. Have you ever prescribed 23 Percocet based on marketing?</p> <p>24 MR. LOESER: Objection. Asked 25 and answered.</p>

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<p>1 THE WITNESS: I have not based 2 a decision to use Percocet based on 3 marketing materials that I'm aware of. 4 QUESTIONS BY MR. LEVINE: 5 Q. What methodology did you use to 6 determine that Endo's marketing influenced 7 the way opioids were prescribed? 8 MR. LOESER: Objection. Form. 9 THE WITNESS: Well, principally 10 I was given the records as described 11 throughout this testimony of either 12 training materials or call notes or 13 internal documents, and upon those -- 14 with review, I have included some 15 examples within my report. And it is 16 on that basis that I've included those 17 in my opinion. 18 QUESTIONS BY MR. LEVINE: 19 Q. So you've reviewed a document 20 and concluded that it influenced the way that 21 opioids were prescribed. 22 Is there any method in between 23 your review of the document and your 24 conclusion that I'm unaware of? 25 MR. LOESER: Objection. Form.</p>	<p>1 documents that would tie those materials to 2 those counties. 3 Q. Do you know if any of the 4 physicians -- if any physicians were 5 influenced to prescribe -- strike that. 6 Do you know if any physicians 7 were influenced to prescribe Endo's opioids 8 based on their marketing? 9 MR. LOESER: Objection. Form. 10 THE WITNESS: Sorry, did you 11 say any physicians? Where? Could you 12 repeat that? 13 QUESTIONS BY MR. LEVINE: 14 Q. Do you know if any physicians 15 were influenced to prescribed Endo's opioids 16 based on their marketing? 17 MR. LOESER: Objection. Form. 18 THE WITNESS: My review of the 19 materials grew from the idea that 20 aggressive marketing in a number of 21 aspects of detailing and -- could be 22 generalized to influence physician 23 decision-making, and to that extent, I 24 do not have a specific link of a 25 particular physician to a particular</p>
<p style="text-align: center;">Page 343</p> <p>1 THE WITNESS: My opinion was 2 formed by the review of the documents 3 provided and -- yeah. 4 QUESTIONS BY MR. LEVINE: 5 Q. No other method? 6 A. Relative to the review of the 7 literature, there's been a relationship of 8 how, again, the influence of -- strike that. 9 I'll just stop there. No other 10 influence. 11 Q. No other influence -- you mean 12 no other method, right? 13 A. No other method beyond the 14 review of the literature that is -- went into 15 the report development and also the materials 16 that were provided for review. 17 That said, I am understanding 18 that this is largely providing examples, and 19 there will be other expert testimony that 20 will focus on -- specifically around 21 marketing. 22 Q. Do you know if any of the 23 marketing materials you reviewed were used in 24 Summit or Cuyahoga Counties? 25 A. Specifically, I do not have</p>	<p style="text-align: center;">Page 345</p> <p>1 Endo marketing. 2 QUESTIONS BY MR. LEVINE: 3 Q. So the answer to my question 4 is, no, you do not know if any physicians 5 were influenced to prescribe Endo's opioids 6 based on their marketing? 7 MR. LOESER: Objection. 8 QUESTIONS BY MR. LEVINE: 9 Q. Correct? 10 MR. LOESER: Asked and 11 answered. 12 THE WITNESS: Beyond the 13 example I gave in terms of a general 14 effect of marketing of opioids for 15 chronic noncancer pain when there's 16 limited or no scientific evidence. 17 QUESTIONS BY MR. LEVINE: 18 Q. You don't have any data 19 indicating what percentage of patients taking 20 opioids were exposed to marketing, do you? 21 MR. LOESER: Objection. Form. 22 Outside the scope of the report. 23 THE WITNESS: Within the 24 preparation of the report, I did not 25 focus on evaluating that -- any</p>

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<p>1 specific relationship or, I should 2 say, percentage of marketing materials 3 to patients. I don't know.</p> <p>4 QUESTIONS BY MR. LEVINE:</p> <p>5 Q. So I'm going to -- I'm trying 6 to move through this as quickly as I can to 7 allow my colleague to have time.</p> <p>8 A. Sure. Sure.</p> <p>9 Q. You cite on -- in Exhibit B of 10 your report, you cite two sales training 11 reports in paragraphs 16 and 17.</p> <p>12 A. Okay.</p> <p>13 Q. Now, this section of your 14 report refers to efforts to trivialize 15 addiction.</p> <p>16 At the beginning of Exhibit B, 17 you say these are examples of efforts to 18 trivialize addiction, correct?</p> <p>19 A. That's correct, yes.</p> <p>20 Q. Okay. You don't cite any 21 statements in these -- from these documents 22 that trivialize addiction, do you?</p> <p>23 MR. LOESER: Objection. Form.</p> <p>24 THE WITNESS: If you can just 25 give me a moment, I'll review these</p>	<p>1 MR. LOESER: -- Endo examples. 2 There are other --</p> <p>3 MR. LEVINE: I'm not suggesting 4 anything of the sort.</p> <p>5 MR. LOESER: Okay. Well, then 6 we've clarified that.</p> <p>7 THE WITNESS: Well, again, 8 reading number 17, "I'd like you to 9 turn up the passion some with Opana," 10 "staying ahead of the pain," "being 11 released from the grip of pain," are 12 tag lines that stand out and should be 13 used along -- these type of 14 statements, again, trying to 15 understand, again, the context in 16 which these were made is limiting.</p> <p>17 So I would agree that there's 18 no specific inference that these 19 agents -- I would say this, that the 20 focus is on the success of pain 21 control with Opana, without any 22 mention of potential harms or risks to 23 addiction. I think that's --</p> <p>24 QUESTIONS BY MR. LEVINE:</p> <p>25 Q. Sorry, just to be clear --</p>
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<p>1 two quick statements. Thank you. 2 Well, again, going back to the 3 beginning of Exhibit B, examples, 4 notes reflecting efforts to trivialize 5 the risk of addiction and exaggerate 6 the benefits of chronic opioid use.</p> <p>7 QUESTIONS BY MR. LEVINE:</p> <p>8 Q. Do you cite any examples of 9 exaggerating the benefits there either?</p> <p>10 MR. LOESER: And I'll note for 11 the record there are other examples 12 that cover those topics.</p> <p>13 MR. LEVINE: Right, but 14 these --</p> <p>15 MR. LOESER: Not in this 16 section. I'm not saying in general.</p> <p>17 MR. LEVINE: First of all, you 18 don't need to note anything for the 19 record. I'm asking about these two 20 examples.</p> <p>21 MR. LOESER: Right. But to the 22 extent you're suggesting these are the 23 only --</p> <p>24 MR. LEVINE: Please don't abuse 25 my time.</p>	<p>1 A. Yes.</p> <p>2 Q. -- you think these documents 3 don't mention potential harms or risks?</p> <p>4 A. I'm talking about these two 5 points, 16 and 17.</p> <p>6 Q. Right.</p> <p>7 You think those documents don't 8 mention -- the documents you're referencing 9 there don't mention potential harms or risks?</p> <p>10 MR. LOESER: Objection. And 11 asked and answered.</p> <p>12 QUESTIONS BY MR. LEVINE:</p> <p>13 Q. Or is it just the statement you 14 pull out of the document that doesn't mention 15 it?</p> <p>16 A. It's just the statement I'm 17 referring to.</p> <p>18 Q. Okay. Do you agree that the 19 majority of opioid analgesics are thought to 20 drive -- strike that.</p> <p>21 Do you agree that the majority 22 of opioid analgesics that are thought to 23 drive the catastrophic figures regarding 24 increased deaths and opioid-induced side 25 effects overwhelmingly comes from</p>

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<p style="text-align: right;">Page 366</p> <p>1 submitted?</p> <p>2 A. Two.</p> <p>3 Q. When did you start working on</p> <p>4 your report?</p> <p>5 A. Somewhere mid or late February.</p> <p>6 Q. And when did you finish your</p> <p>7 report?</p> <p>8 A. March 25th.</p> <p>9 Q. And when you say you started in</p> <p>10 mid-February, you're talking about</p> <p>11 February 2019?</p> <p>12 A. That's correct.</p> <p>13 Q. Doctor, for the Purdue call</p> <p>14 notes that you cite, some of these are from</p> <p>15 outside of Ohio; is that fair?</p> <p>16 A. There's -- I see one.</p> <p>17 Number 10 is Kentucky. Number 11's Kentucky.</p> <p>18 It looks like the bulk of them are from Ohio.</p> <p>19 Q. Number 8 is from West Virginia?</p> <p>20 A. You're right, yes, that's</p> <p>21 correct.</p> <p>22 Q. And for the Ohio call notes,</p> <p>23 you didn't determine whether any of these</p> <p>24 call notes are from either Cuyahoga County or</p> <p>25 Summit County?</p>	<p style="text-align: right;">Page 368</p> <p>1 QUESTIONS BY MR. TAM:</p> <p>2 Q. Did you do any research into</p> <p>3 the prescribing practices of any of the</p> <p>4 doctors corresponding to the call notes you</p> <p>5 cite in your report?</p> <p>6 A. No, I have not.</p> <p>7 Q. So it's fair to say you don't</p> <p>8 know what the patient outcomes are for any of</p> <p>9 the patients that were prescribed an opioid</p> <p>10 medication by any of the doctors called upon</p> <p>11 in the call notes you cited, correct?</p> <p>12 MR. LOESER: Objection. Form.</p> <p>13 THE WITNESS: As I mentioned</p> <p>14 before, I did not have any of the data</p> <p>15 that linked any of these particular</p> <p>16 patients to their -- sorry, any of</p> <p>17 these comments to particular</p> <p>18 physicians, nor their patient or</p> <p>19 patient outcome, that's correct.</p> <p>20 QUESTIONS BY MR. TAM:</p> <p>21 Q. So you can't identify any</p> <p>22 specific prescription for a Purdue opioid</p> <p>23 medication that a doctor in Cuyahoga County</p> <p>24 or Summit County wrote because of anything</p> <p>25 Purdue said or did, can you?</p>
<p style="text-align: right;">Page 367</p> <p>1 A. That's correct.</p> <p>2 Q. Would you be surprised to learn</p> <p>3 that only one of the call notes is from</p> <p>4 Cuyahoga County?</p> <p>5 MR. LOESER: Objection. Form.</p> <p>6 Assumes facts not in evidence.</p> <p>7 THE WITNESS: That's new</p> <p>8 information at this setting.</p> <p>9 QUESTIONS BY MR. TAM:</p> <p>10 Q. Are you aware that the call</p> <p>11 notes provide the city for the doctor?</p> <p>12 A. I'm sorry, could you repeat</p> <p>13 that?</p> <p>14 MR. LOESER: Objection. Form.</p> <p>15 THE WITNESS: I wasn't quite</p> <p>16 sure I understood that. Sorry.</p> <p>17 QUESTIONS BY MR. TAM:</p> <p>18 Q. Are you aware that the call</p> <p>19 notes identify the city for where the doctor</p> <p>20 is located?</p> <p>21 MR. LOESER: Objection. Form.</p> <p>22 THE WITNESS: I remember</p> <p>23 reviewing aspects of it, but I was</p> <p>24 unaware that the call notes had that</p> <p>25 level of detail.</p>	<p style="text-align: right;">Page 369</p> <p>1 MR. LOESER: Objection. Form.</p> <p>2 THE WITNESS: My opinion was,</p> <p>3 again, built on a broader view that</p> <p>4 misleading statements by Purdue sales</p> <p>5 representatives to influence</p> <p>6 prescribing practices of physicians</p> <p>7 throughout the United States,</p> <p>8 including Ohio, was a driving force in</p> <p>9 the overprescription of opioids,</p> <p>10 leading to harm.</p> <p>11 QUESTIONS BY MR. TAM:</p> <p>12 Q. Doctor, if you could please</p> <p>13 focus on my question.</p> <p>14 You can't identify any specific</p> <p>15 prescription for a Purdue opioid medication</p> <p>16 that a doctor in Cuyahoga or Summit County</p> <p>17 wrote because of anything Purdue said or did,</p> <p>18 an you?</p> <p>19 MR. LOESER: Objection. Asked</p> <p>20 and answered.</p> <p>21 THE WITNESS: Again, I do not</p> <p>22 have the data that linked a specific</p> <p>23 comment, a physician, to a particular</p> <p>24 prescription or outcome.</p> <p>25 Was that your question?</p>

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<p style="text-align: right;">Page 370</p> <p>1 QUESTIONS BY MR. TAM:</p> <p>2 Q. So the answer to my question 3 is, no, you can't identify any specific 4 prescription for a Purdue opioid medication 5 that a doctor in Cuyahoga or Summit County 6 wrote because of anything Purdue said or did?</p> <p>7 MR. LOESER: Objection. Asked 8 and answered.</p> <p>9 QUESTIONS BY MR. TAM:</p> <p>10 Q. Right?</p> <p>11 MR. LOESER: Same objection.</p> <p>12 THE WITNESS: It's the same 13 answer. No, I do not have the data 14 that links those circumstances.</p> <p>15 QUESTIONS BY MR. TAM:</p> <p>16 Q. And you can't identify a doctor 17 in Cuyahoga or Summit County who relied on 18 any of Purdue's marketing materials when 19 prescribing a Purdue opioid medication to his 20 or her patients, can you?</p> <p>21 MR. LOESER: Objection. It's 22 outside the scope of his report.</p> <p>23 THE WITNESS: Yeah, I have no 24 such data to link those events.</p> <p>25</p>	<p style="text-align: right;">Page 372</p> <p>1 OxyContin promotional material that you think 2 was directed to consumers?</p> <p>3 A. As I recall -- if you can just 4 give me a moment -- that there was a number 5 of marketing materials, but one stands out is 6 the so-called Spanos video, Spanos video. 7 And I believe, as I recall, that that video 8 was targeted to -- directly to patients, as I 9 recall.</p> <p>10 Q. Do you know whether any doctor 11 in Cuya -- let me strike that.</p> <p>12 Do you know whether anyone in 13 Cuyahoga County or Summit County ever saw 14 those videos that you're referring to?</p> <p>15 A. Again, that was not within the 16 scope or the depth of marketing review. I'm 17 not aware of -- I cannot confirm that any 18 people viewed that video in Cuyahoga County.</p> <p>19 Q. Do you have any evidence that 20 the use of those videos led to any instances 21 of abuse of opioids in Cuyahoga or Summit 22 County?</p> <p>23 MR. LOESER: Objection. 24 Outside the scope of his report.</p> <p>25 THE WITNESS: I have no</p>
<p style="text-align: right;">Page 371</p> <p>1 QUESTIONS BY MR. TAM:</p> <p>2 Q. So you can't identify any such 3 doctor, correct?</p> <p>4 MR. LOESER: Same objection.</p> <p>5 THE WITNESS: I cannot identify 6 a particular doctor beyond the concern 7 that they're being influenced based on 8 a lack of scientific evidence.</p> <p>9 QUESTIONS BY MR. TAM:</p> <p>10 Q. But again, you can't identify 11 any specific doctor in Cuyahoga or Summit 12 County?</p> <p>13 A. That's correct.</p> <p>14 MR. LOESER: Same objection.</p> <p>15 QUESTIONS BY MR. TAM:</p> <p>16 Q. Are you aware that Purdue has 17 never done direct-to-consumer advertising for 18 OxyContin?</p> <p>19 A. My understanding of product 20 information that I reviewed for the report 21 included medications for the treatment of 22 chronic noncancer pain that appeared to me to 23 be directed at patients -- directly at 24 patients.</p> <p>25 Q. Can you cite to a specific</p>	<p style="text-align: right;">Page 373</p> <p>1 evidence that directly links that 2 county to that particular marketing 3 material.</p> <p>4 QUESTIONS BY MR. TAM:</p> <p>5 Q. And you don't know whether any 6 doctor in Cuyahoga or Summit County relied on 7 those videos when prescribing a Purdue opioid 8 medication to his or her patients, do you?</p> <p>9 MR. LOESER: Objection. 10 Outside the scope of his report.</p> <p>11 THE WITNESS: Again, I have no 12 evidence that would support that. 13 I'm sorry, I lost track of your 14 statement or question.</p> <p>15 QUESTIONS BY MR. TAM:</p> <p>16 Q. You don't know whether any 17 doctor in Cuyahoga or Summit County relied on 18 anything in those videos when prescribing a 19 Purdue opioid medication to his or her 20 patients, do you?</p> <p>21 MR. LOESER: Same objection. 22 THE WITNESS: I do not.</p> <p>23 QUESTIONS BY MR. TAM:</p> <p>24 Q. And are you aware that those 25 videos were no longer distributed as of July</p>

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<p style="text-align: right;">Page 374</p> <p>1 2001?</p> <p>2 MR. LOESER: Objection. Calls</p> <p>3 for speculation.</p> <p>4 THE WITNESS: I did not know.</p> <p>5 QUESTIONS BY MR. TAM:</p> <p>6 Q. You cite to the 2003 GAO report</p> <p>7 in your report, right?</p> <p>8 A. That has been referenced in</p> <p>9 various ways in the report.</p> <p>10 Q. If you turn to page -- sorry,</p> <p>11 paragraph 76 of your report?</p> <p>12 A. 76?</p> <p>13 Q. Yes.</p> <p>14 A. Okay.</p> <p>15 Q. So in paragraph 76, one of the</p> <p>16 advertisements you single out for Purdue is</p> <p>17 this ad that says in part, "There Can Be Life</p> <p>18 with Relief."</p> <p>19 Do you see that?</p> <p>20 You'll have to turn the page,</p> <p>21 actually. Paragraph --</p> <p>22 A. Oh, okay.</p> <p>23 Q. Do you see that?</p> <p>24 A. Yes, I do.</p> <p>25 Q. If you turn back to the prior</p>	<p style="text-align: right;">Page 376</p> <p>1 THE WITNESS: I was not aware</p> <p>2 of that.</p> <p>3 QUESTIONS BY MR. TAM:</p> <p>4 Q. Were you aware that the FDA</p> <p>5 sent Purdue a warning letter about this</p> <p>6 advertisement in 2002?</p> <p>7 MR. LOESER: Objection. Form.</p> <p>8 THE WITNESS: I was aware that</p> <p>9 the FDA sent warning letters to Purdue</p> <p>10 about misstatements in their marketing</p> <p>11 materials. The chronology of that, I</p> <p>12 can't recall.</p> <p>13 QUESTIONS BY MR. TAM:</p> <p>14 Q. Are you aware that in response</p> <p>15 to that warning letter Purdue took corrective</p> <p>16 actions?</p> <p>17 MR. LOESER: Objection. Form.</p> <p>18 THE WITNESS: I understand that</p> <p>19 in response to the letter that Purdue</p> <p>20 made certain changes in their</p> <p>21 marketing and withdrew certain</p> <p>22 materials.</p> <p>23 QUESTIONS BY MR. TAM:</p> <p>24 Q. Are you aware that Purdue</p> <p>25 issued a corrective promotional piece in</p>
<p style="text-align: right;">Page 375</p> <p>1 page, you say that this is a 2006 ad?</p> <p>2 A. That is what's written here in</p> <p>3 the document.</p> <p>4 Q. What is your basis for that</p> <p>5 assertion?</p> <p>6 A. As I recall, review of the many</p> <p>7 documents included brochures, and there was,</p> <p>8 again, an attempt to pull out examples that</p> <p>9 linked -- pardon me -- particular phrases</p> <p>10 with an image. That's my recollection.</p> <p>11 Q. What's your basis for saying</p> <p>12 that this is an ad from 2006?</p> <p>13 MR. LOESER: Objection. Asked</p> <p>14 and answered.</p> <p>15 THE WITNESS: I don't recall</p> <p>16 the details, other than I, at the</p> <p>17 time -- well, I can only speculate</p> <p>18 that somewhere in this review there</p> <p>19 was a link of that date with that</p> <p>20 image in some of the reviewed</p> <p>21 materials.</p> <p>22 QUESTIONS BY MR. TAM:</p> <p>23 Q. Are you aware that this ad was</p> <p>24 withdrawn in December 2002?</p> <p>25 MR. LOESER: Objection. Form.</p>	<p style="text-align: right;">Page 377</p> <p>1 response to the FDA's warning letter?</p> <p>2 A. I'm aware that Purdue responded</p> <p>3 to the request to withdraw certain marketing</p> <p>4 materials and claims.</p> <p>5 Q. But you're not aware of any</p> <p>6 corrective advertisements?</p> <p>7 A. I'm not aware of that.</p> <p>8 Q. Since 2002 are you aware of any</p> <p>9 warning letter that Purdue -- let me ask that</p> <p>10 again. Strike that.</p> <p>11 Since 2002, are you aware of</p> <p>12 any other warning letter that the FDA sent to</p> <p>13 Purdue about its marketing of OxyContin?</p> <p>14 MR. LOESER: Objection. It's</p> <p>15 outside the scope of his report.</p> <p>16 THE WITNESS: Yeah, that's</p> <p>17 beyond the scope of my report. I have</p> <p>18 no recollection of review of a</p> <p>19 document that would support that.</p> <p>20 QUESTIONS BY MR. TAM:</p> <p>21 Q. But you said you're aware of</p> <p>22 letters from the FDA to Purdue, right?</p> <p>23 A. Broadly. The principal -- I'm</p> <p>24 aware of a letter that requested Purdue to</p> <p>25 make -- or defend certain marketing claims.</p>